

**CLAIMS:**

1. A method comprising:  
applying changes to candidate configuration data of a network device;  
applying an implementation-specific configuration policy to validate the changed candidate configuration data; and  
selectively committing the changed candidate configuration data to operational configuration data based on a result of the validation.
2. The method of claim 1, wherein applying an implementation-specific configuration policy comprises:  
identifying an error within the changed candidate configuration data based on the implementation-specific configuration policy; and  
correcting the error by automatically altering the changed candidate configuration data in response to the identified error.
3. The method of claim 1, wherein applying an implementation-specific configuration policy comprises:  
identifying a warning condition within the changed candidate configuration data based on the implementation-specific configuration policy; and  
correcting the warning condition by automatically altering the changed candidate configuration data.
4. The method of claim 1, wherein applying an implementation-specific configuration policy comprises:  
receiving a commit command; and  
automatically applying the implementation-specific configuration policy in response to receiving the commit command.

5. The method of claim 1, wherein selectively committing the changes includes committing the changes to the operational configuration when application of the implementation-specific configuration policy results in generation of a warning.
6. The method of claim 1, wherein selectively committing the changes includes automatically rejecting the changes when application of the implementation-specific configuration policy results in an error.
7. The method of claim 1, wherein applying an implementation-specific configuration policy comprises:
  - generating a copy of the candidate configuration data; and
  - applying the implementation-specific configuration policy to the copy of the candidate configuration.
8. The method of claim 7, wherein applying an implementation-specific configuration policy to the copy of the candidate configuration occurs via a Extensible Markup Language (XML) Application Program Interface (API).
9. The method of claim 7,
  - wherein generating a copy of the candidate configuration data comprises generating a version of the candidate configuration data that conforms to an Extensible Markup Language, and
  - wherein applying an implementation-specific configuration policy comprises applying an Extensible Style Language Transformation (XSLT) script to the copy of the candidate configuration data.
10. The method of claim 1, wherein the implementation-specific configuration policy comprises an Extensible Style Language Transformation (XSLT) script.

11. The method of claim 1, wherein the implementation-specific configuration policy is user-definable by a client, the method further comprising:
  - receiving input from the client; and
  - updating the implementation-specific configuration policy based on the input.
12. The method of claim 1, further comprising:
  - receiving the changes from a client associated with an authorization level; and
  - selecting the implementation-specific configuration policy from a plurality of implementation-specific configuration policies based on the determined authorization level
13. The method of claim 12, further comprising:
  - receiving identification information from the client; and
  - determining the authorization level based on the identification information.
14. The method of claim 13, wherein identification information includes a password and a username.
15. A system comprising:
  - a memory to store operational configuration data and candidate configuration data;
  - and
  - a control unit to apply an implementation-specific configuration policy to validate changes to the candidate configuration data, and selectively commit the changed candidate configuration data to the operational configuration data based on a result of the validation.
16. The system of claim 15, wherein the control unit applies an implementation-specific configuration policy by generating an error based on the implementation-specific configuration policy, and selectively correcting the error by altering the changed candidate configuration data based on the error.

17. The system of claim 15, wherein the control unit applies an implementation-specific configuration policy by identifying a warning condition based on the implementation-specific configuration policy, and altering the changed candidate configuration data based on the warning condition.

18. The system of claim 15,  
wherein the control unit comprises a management interface to apply the implementation-specific configuration policy, and  
wherein the management interface receives a commit command, and automatically applies the implementation-specific policy in response to receiving the commit command.

19. The system of claim 18, wherein the management interface selectively commits the changed candidate configuration data to the operational configuration when application of the implementation-specific configuration policy results in generation of a warning.

20. The system of claim 18, wherein the management interface automatically rejects the changes when application of the implementation-specific configuration policy results in an error.

21. The system of claim 15, wherein the control unit comprises a management interface to apply the implementation-specific configuration policy by generating a copy of the candidate configuration data and applying the implementation-specific configuration policy to the copy of the candidate configuration.

22. The system of claim 21, wherein the management interface comprises an Extensible Markup Language (XML) Application Program Interface (API) to apply the implementation-specific configuration policy to the copy of the candidate configuration.

23. The system of claim 21,  
wherein the management interface comprises an Extensible Markup Language (XML) generator to generate the copy of the candidate configuration data, wherein the copy of the candidate configuration data includes a version of the candidate configuration data that conforms to the Extensible Markup Language, and  
wherein the management interface applies an implementation-specific configuration policy comprising an Extensible Style Language Transformation (XSLT) script to the copy of the candidate configuration data.
24. The system of claim 15, wherein the implementation-specific configuration policy comprises an implementation-specific configuration policy defined by a client and wherein the control unit comprises a management interface to receive input from the client and update the implementation-specific configuration policy based on the input.
25. The system of claim 15, wherein the control unit comprises a management interface to receive the changes from a client associated with an authorization level and select the implementation-specific configuration policies based on the determined authorization level.
26. The system of claim 25, wherein the management interface comprises a command line interface to receive identification information from the client and a management module to determine the authorization level based on the identification information.
27. The system of claim 26, wherein identification information includes a password and a username.

28. A computer-readable medium comprising instructions to cause a processor to:  
apply changes to candidate configuration data of a network device;  
apply an implementation-specific configuration policy to validate the changed candidate configuration data; and  
selectively commit the changed candidate configuration data to the operational configuration data based on a result of the validation.
29. The computer-readable medium of claim 28, further comprising instructions to cause the processor to apply an implementation-specific configuration policy by generating an error based on the implementation-specific configuration policy, and selectively correcting the error by altering the changed candidate configuration data based on the error.
30. The computer-readable medium of claim 28, further comprising instructions to cause the processor to apply an implementation-specific configuration policy by generating an warning based on the implementation-specific configuration policy, and selectively correcting the warning by altering the changed candidate configuration data based on the warning.
31. The computer-readable medium of claim 28, further comprising instructions to cause the processor to:  
receive a commit command; and  
automatically apply the implementation-specific policy in response to receiving the commit command.
32. The computer-readable medium of claim 28, further comprising instructions to cause the processor to commit the changes to the operational configuration when application of the implementation-specific configuration policy results in generation of a warning.

33. The computer-readable medium of claim 28, further comprising instructions to cause the processor to automatically reject the changes when application of the implementation-specific configuration policy results in an error.

34. The computer-readable medium of claim 28, further comprising instructions to cause the processor to:

generate a copy of the candidate configuration data; and

apply the implementation-specific configuration policy to the copy of the candidate configuration.

35. The computer-readable medium of claim 34, further comprising instruction to cause the processor to apply an implementation-specific configuration policy to the copy of the candidate configuration via a Extensible Markup Language (XML) Application Program Interface (API).

36. The computer-readable medium of claim 34, further comprising instructions to cause the processor to generate a version of the candidate configuration data that conforms to an Extensible Markup Language.

37. The computer-readable medium of claim 36, wherein the implementation-specific configuration policy includes an Extensible Style Language Transformation script and further comprising instructions to cause the processor to apply the Extensible Style Language Transformation (XSLT) script to the copy of the candidate configuration data.

38. The computer-readable medium of claim 28, wherein the implementation-specific configuration policy comprises a user-definable implementation-specific configuration policy, and the computer-readable medium further comprises instructions to cause the processor to receive input from a client and update the implementation-specific configuration policy based on the input.

39. The computer-readable medium of claim 28, further comprising instructions to cause the processor to:

- receive the changes from a client associated with an authorization level; and
- select the implementation-specific configuration policy based on the determined authorization level.

40. The computer-readable medium of claim 39, further comprising instructions to cause the processor to:

- receive identification information from the client; and
- determine the authorization level based on the identification information.